

User's Manual



Emotia Xtreme mx

Contents

Introduction to the Emotia Xtreme MX	Chapter 1
Introduction	1-1 1-2
Installation and Operation	
Installing the Emotia Xtreme MX Rack Mounting Cabling Connecting the Input and Output Cables Front and Rear Panels Front Panel Rear Panel	2-1 2-1 2-5 2-5
Other Reference Material	Appendix A
Accessories/Part Numbers	A-1
Safety InstructionsLimited Warranty	

Emotia Xtreme MX User's Manual 68-302-02 Rev. A 79-05

Legend of Icons

The following icons may be used in this manual:



___ Important information – for example, an action or a step that must be done before proceeding.



A Warning – possible damage could occur.



 $\overline{\equiv} /$ $_{-}$ A Note, a Hint, or a Tip that may be helpful.



Possible Electrostatic Discharge (ESD) damage could result from touching electronic components.



Additional information may be referenced in another section, or in another document.

Extron's Emotia Xtreme MX User's Manual

Chapter One

Introduction to the Emotia Xtreme MX

Introduction

Features

Specifications

Introduction

About This Manual

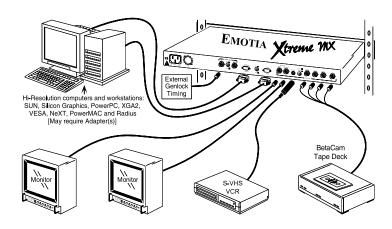
This manual contains operation, configuration and option information for the Emotia Xtreme MX Scan Converter.

Emotia Xtreme MX Facts and Features

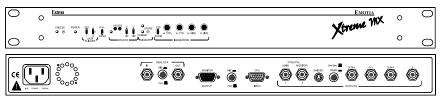
Extron's EmotiaTM Xtreme MX converts up to 1600 x 1280 resolution video from Workstation-PC, MAC, SUN, SGI and more to Composite video (NTSC/PAL), Y/C (S-Video), Component video and RGBS. It provides a real time, high resolution output along with professional genlock capabilities, multi-level anti-flicker, zoom, sizing and positioning capabilities and 21 preset input memory blocks. With digital signal processing, the Emotia Xtreme MX also offers a full spectrum of 16 million colors. Its multiscanning capabilities provide automatic recognition and auto-lock of scan rates between 29 to 92 kHz.

The Emotia Xtreme MX is housed in a rack-mountable metal enclosure and includes an internal 100-240 volt switch mode power supply.

An example of an Emotia Xtreme MX application with video input from a workstation is shown in the diagram below.



Emotia Xtreme MX front and rear panels are shown below.



Features

- Component Video Output The Emotia Xtreme MX provides high quality video output in the Component Video format (R-Y, B-Y, Y) on BNC connectors.
- Horizontal/Vertical Sizing and Positioning These controls allow centering and sizing of the output image for optium positioning on the display device. All images displayed through the Emotia Xtreme MX can be displayed full-screen and without any image cropping utilizing the sizing and shifting controls.
- Genlock Genlock capabilities allow for the integration of the scan converted images into a professional broadcast environment.
 Genlocking provides for seamless, vertical interval switching of these converted high resolution sources, and other video sources.
 Front panel access to horizontal phasing and subcarrier phasing control is provided for easy adjustment.
- Multiscanning The Emotia Xtreme MX automatically recognizes all signals from 29 kHz to 92 kHz and resolutions from 320 x 200 up to 1600 x 1280.
- Outputs The Emotia Xtreme MX outputs NTSC or PAL video, Y/C (S-Video), Component Video and RGBS to fulfill any application and offer compatibility with virtually any output source.
- Pan/Zoom The Emotia Xtreme MX has totally variable Horizontal and Vertical sizing controls that even allow for complete "pan and scan" around the displayed image up to 200%. With analog control, adjust the image position and size on screen for maximum usability.
- Presets Recall previous settings without having to re-position or size the image. There are twenty one different presets for sizing and positioning of all input sources.
- Six Levels of Anti-Flicker Although the Emotia Xtreme MX produces extremely clear output resolution, an anti-flicker switch has been included to ensure complete satisfaction. There are 6 levels of built in anti-flicker to fit virtually any application specifically and significantly decrease the flicker that is inherent to interlaced video allowing for a smooth, clean and stable image output.

Specifications

Input Signals

Computer Compatibility	VGA, XGA, SUN	, Silicon Graphics,
	PowerPC, VESA	. NeXT. PowerMAC.

Quadra, PowerBook, Radius and more.

non-interlacing

Frequencies 29 to 92 kHz

Format RGsB, RGBS, RGBHV

Output Signals

Type	Composite, S-Video, RGBS, Component
NTSC	15.75 kHz/60 Hz interlaced, 525 lines
PAL	15.63 kHz/50 Hz interlaced, 625 lines

Connectors

Computer Input 15 HD Male

(MAC & 13W3 adapters supplied*)

Local Monitor 15 HD Female

(MAC & 13W3 adapters supplied*)

NTSC/PAL BNC Female

S-VHS 4-pin DIN (S-Video) Female

RGBS/Component Video BNC Female x 4

48 cm W x 30 cm D x 4.4 cm H

Shipping Weight 11.0 lbs

5.0 kg

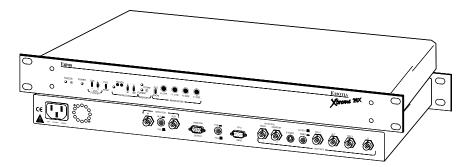
Power Supply 100-240 VAC, 50/60 Hz

Internal switch mode

MTBF 30,000 Hours

Warranty Two years, parts &labor

^{*} See Appendix for complete list of supplied adapters.



Extron's Emotia Xtreme MX User's Manual

Chapter Two

Installation and Operation

Rack Mounting

Cabling

Front Panel

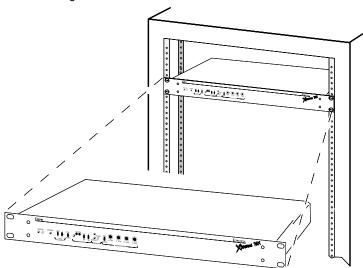
Rear Panel

Installing the Emotia Xtreme MX

If rack mounting is required it should be done before cabling, otherwise, skip to "Cabling" below.

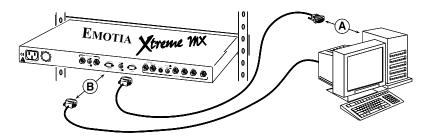
Rack Mounting

To rack mount the Emotia Xtreme MX, mount it as shown below using 4-user supplied screws to secure the front panel to the rack. Upon completion of the rack mounting procedure, go to "Cabling" below.



Cabling

The video output from a workstation connects to the Emotia Xtreme MX CPU INPUT connector (standard VGA 15-pin HD Male). An adapter may be required between the workstation and the VGA cable to the Xtreme MX (see bubble A in the diagram below). The workstation monitor is connected to the MX MONITOR OUTPUT connector (standard VGA 15-pin HD Female). An adapter may be required between the monitor cable and the MX (see bubble B in the diagram below). The Emotia Xtreme MX is compatible with most workstations and the following procedures cover cabling for most applications.



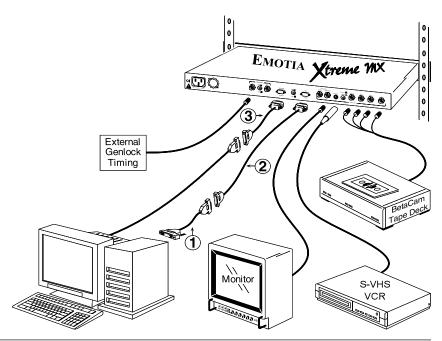
VGA PC'S and SUN/SGI (All cables are included)

- Turn the computer and its monitor Off. For a SUN/SGI application, connect the provided adapters ① and ③. PCs will not require adapters. Use the diagram below as a guide.
- Connect the VGA input cable @ (26-112-15) male end to the computer or adapter ① and the female end to the Emotia Xtreme MX CPU Input connector.
- 3. Use the computer monitor's cable to connect to the Emotia Xtreme MX Monitor Output connector or adapter ③ cable.
- Connect the cable from the desired Emotia Xtreme MX output connector (see note below) to the input connector of the output device.
- 5. Turn the computer and the computer monitor power **On**.
- Use the Emotia Xtreme MX Horizontal centering, Vertical centering, Horizontal Size and Vertical Size controls to align the image on the screen.
- 7. Set the remaining front panel switches as required.



Emotia Xtreme MX available outputs are:

- Composite Video (2 BNC connectors labeled MAIN & MONITOR, for 1 or 2 monitor(s) or other output devices.)
- 2. S-Video (4-pin Mini DIN connector)
- Four BNC connectors switchable to either:
 A. RGBS Video B. Component Video (R-Y, B-Y, Y)



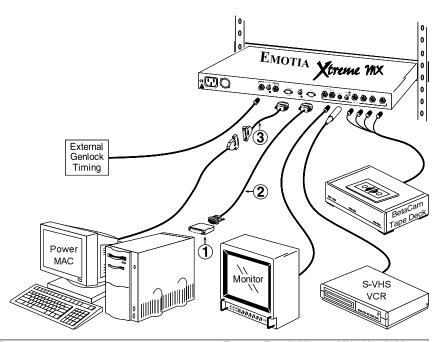
Installation – Mac Systems (All cables are included)

- Turn the Mac and its monitor Off. Use the diagram below as a guide.
- Connect the Mac/VGA Adapter ① to the Mac computer configured for desired scan rate. Connect the VGA input
 cable ② (PN# 26-112-15) from the Mac/VGA Adapter to the
 CPU Input on the Emotia Xtreme MX. Connect the Mac
 monitor cable to the adapter ② and connect the adapter to
 the Monitor Output on the Emotia Xtreme MX.
- Connect the cable from the desired Emotia Xtreme MX output connector (see note below) to the input connector of the output device.
- 5. Turn the computer and the computer monitor power On.
- 6. Use the Emotia Xtreme MX Horizontal centering, Vertical centering, Horizontal Size and Vertical Size controls to align the image on the screen.
- 7. Set the remaining front panel switches as required.



Emotia Xtreme MX available outputs are:

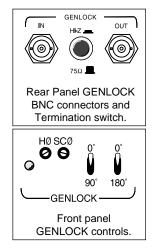
- Composite Video (2 BNC connectors labeled MAIN & MONITOR, for 1 or 2 monitor(s) or other output devices.)
- 2. S-Video (4-pin Mini DIN connector)
- 3. Four BNC connectors switchable to either: A. RGBS Video B. Component Video (R-Y, B-Y, Y)



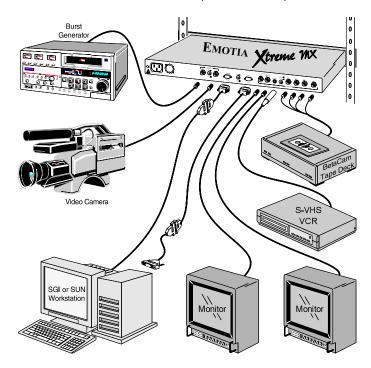
Page 2-3

Genlock

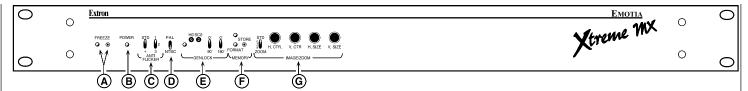
The Genlock IN and OUT BNC connectors on the rear panel of the Emotia Xtreme MX provide a way to synchronize the output video with an incoming Genlock signal. The IN BNC connector receives the external Genlock timing signal, the OUT BNC connector allows the signal to be passed on to another video device if required. The termination switch (located between the In and Out BNC connectors) enables termination of the Genlock signal at 75 ohms if no other termination is available. Front panel controls labeled GENLOCK enable fine adjustment of the synchronized video.



An Emotia Xtreme MX using a Burst generator as the source for a Genlock signal is shown in the diagram below. The GENLOCK signal passes through the Xtreme MX GENLOCK OUT BNC connector and on to another device (Video Camera).



See Emotia Xtreme MX Front Panel and Rear Panel on Pages 2-5 and 2-6 for operating information.



Emotia Xtreme MX Front Panel

- **A.** Freeze Button and LED Press the Freeze Button once to freeze the display on a frame, press it again to release the display. The LED is ON in Freeze Frame mode.
- B. Power On LED This LED is ON if power is applied to the unit.
- **C. Anti Flicker** Six levels of anti-flicker are built in. Set switches for minimum flicker. For example, for highest amount of flicker reduction the anti-flicker switches would be set in the "+" and "3" positions.
- D. NTSC/PAL- This switch selects the video standard to be used, NTSC or PAL.
- **E. Genlock Controls** If using Genlock, the two switches combine to make a coarse phase setting between the video output signal and the Genlock signal. These switch settings provide for 0° (in phase), or delayed by 90°, 180°, or 270° (both switches down) after the Genlock signal. The SCØ control is used to "fine-tune" this phase between Genlock sub-carrier (color burst) and the output video. The HØ control is used to adjust the phase between the Genlock Sync and the Output Video Sync. The GENLOCK LED will illuminate when an active reference signal is applied.
- **F. Memory** Store up to 21 sizing and positioning settings for later recall. To save a setting in memory, press and hold the STORE button until the STORE LED flashes ON then OFF. Memory settings are recalled automatically when a video signal is applied with a scan rate matching one for which settings were previously stored. To reset an altered memory setting to the previously stored position, toggle the NTSC/PAL switch (D). This is only available if the altered settings have not been stored.

Installation and Operation

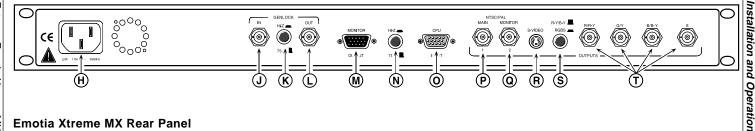
G. IMAGE/ZOOM – STD = Underscan, OVER = Overscan, ZOOM = Zoom. With switch in the ZOOM position, use the sizing controls to adjust magnification up to 200%. H CTR and V CTR controls allow movement within the magnified image.

Horizontal Centering Control – Moves the picture to the left or right on the display screen.

Vertical Centering Control – Moves the position of the picture up or down on the screen.

Horizontal Size Control – This adjusts the width of the picture.

Vertical Size Control – This adjusts the height of the picture.



Emotia Xtreme MX Rear Panel

- H. AC Power Connector Standard IEC type. 100-240 VAC, 50/60 Hz, Internal switch mode
- **GENLOCK IN** Connector BNC connector for Genlock input.
- **K.** GENLOCK HI-Z/75 Ω Pushbutton selects termination, If there is no other Genlock termination, set the switch to 75 Ω .
- GENLOCK OUT Connector BNC connector for Genlock out to next device (if any).
- **MONITOR OUTPUT** Female 15-pin VGA style connector.
- **N.** HI-Z/75W Switch HI-Z = output monitor connected, 75Ω position = no output monitor.
- O. CPU INPUT Male 15-pin VGA style connector.
- NTSC/PAL MAIN BNC Connector Composite Video Output number 1.
- Q. NTSC/PAL MONITOR BNC Connector Composite Video Output number 2.
- S-Video Connector S-Video output for S-VHS, Hi8 or other devices accepting this video format.
- S. R-Y/B-Y/Y / RGBS Pushbutton Selects R-Y/B-Y/Y (Component video) or RGBS video for BNC output connectors.
- T. COMPONENT/RGBS Output Four BNC connectors for Component or RGBS output video.

		Installation and Operation
NOTES:		
	-	

Extron's Emotia Xtreme MX User's Manual

Appendix A

Other Reference Material

Accessories and Part Numbers

Limited Warranty

Accessories/Part Numbers	
BNC-4 HR Cable	
BNC-4-3'HR (3 feet/0.9 meters)	
BNC-4-6'HR (6 feet/1.8 meters)	
BNC-4-12'HR (12 feet/3.6 meters)	
BNC-4-25'HR (25 feet/7.5 meters)	
BNC-4-50'HR (50 feet/15.0 meters)	
BNC-4-75'HR (75 feet23.0 meters)	
BNC-4-100'HR (100 feet/30.0 meters)	
BNC-4-150'HR (150 feet/45.0 meters)	
BNC-4-200'HR (200 feet/60.0 meters)	
BNC-4-250'HR (250 feet/75.0 meters)	
BNC-4 Mini-HR Bulk (300'/90m up to 5000'/1500m)	
DNO-4 Willi-Filk Bulk (300/30111 up to 3000/130011)	22-073-01
VGA extension cables	
VGA 3' HR (3 feet/0.9 meters)	26-112-17
VGA 6' HR (6 feet/1.8 meters)	
VGA 15' HR (15 feet/4.5 meters)	
VGA 25' HR (25 feet/7.5 meters)	
VGA 50' HR (50 feet/15.0 meters)	
VGA 75' HR (75 feet/23.0 meters)	
VGA 100' HR (100 feet/30.0 meters)	
VGA 150' HR (150 feet/45.7 meters)	
VGA 200' HR (200 feet/60.0 meters)	
VGA 250' HR (250 feet/76.2 meters)	26-112-16
RCA-6' - RCA Male to Male, 6 feet/1.8 meters	26-345-01
TOTA Wate to Maio, o local 1.0 motors	20 040 01
S-VHS-6' - Male to Male S-Video Cable, 6 feet/1.8 meters	26-316-02
S-VHSM20' - Male to Male S-Video Cable, 20 feet/6 meters	
S-VHS BNC - Male to Male S-Video to BNC Cable Adapter	
·	
Emotia Xtreme MX	60-225-01
Accessories supplied with the Emotia Xtreme MX:	
13W3/VGA adapter	26 272 01
13W3/VGA monitor cable, 1' (0.3 m)	
Mac/VGA adapter	
Mac/VGA monitor cable, 1' (0.3 m)	
Mac HV/VGA monitor cable, 1' (0.3 m)	26-340-02
S-Video cable, 6' (1.8 m)	26-316-02
RCA cable, 6' (1.8 m)	
VGA 6' HR	
BNC/M-RCA/F adapter	10-264-01

